



## Patent and Trademark Office

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ART UNIT

PAPER NUMBER

HO, R

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This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

DATE MAILED:

11/29/96

This application has been examined  Responsive to communication filed on 5-11-95  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

## Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1.  Notice of References Cited by Examiner, PTO-892.
2.  Notice of Draftsman's Patent Drawing Review, PTO-948.
3.  Notice of Art Cited by Applicant, PTO-1449.
4.  Notice of Informal Patent Application, PTO-152.
5.  Information on How to Effect Drawing Changes, PTO-1474.
6. \_\_\_\_\_

## Part II SUMMARY OF ACTION

1.  Claims 15-20 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2.  Claims \_\_\_\_\_ have been cancelled.

3.  Claims \_\_\_\_\_ are allowed.

4.  Claims 15, 18 are rejected.

5.  Claims 16-17, 19-20 are objected to.

6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.

7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8.  Formal drawings are required in response to this Office action.

9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable;  not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been  approved by the examiner;  disapproved by the examiner (see explanation).

11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved;  disapproved (see explanation).

12.  Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14.  Other

## EXAMINER'S ACTION

Art Unit: 2307

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract should be limited to a single paragraph. Correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heffernam et al. (USPN 5,379,419).

Art Unit: 2307

**Regarding claim 15:**

Heffernam et al. discloses the ‘cardinality’ as claimed in col.3, l.13-15; and  
‘a relational database’ as claimed in col.4, l.26-29; and  
‘memory means’ as claimed in col.25, l. 13-21; and  
‘relation definition table’ as claimed in col.22, l.58-62 and col.11, l.46-49; and  
‘relation instance table’ as claimed in col.24, l.51-58 and col.12, l.38-43; and  
‘means for storing a plurality of relation’ as claimed in col.28, l.53-56; and  
‘means for detecting a cardinality violation’ as claimed in col.13, l.50-57; and  
‘first entity’, ‘second entity’ and ‘third entity’ as claimed in col.13, l.50-57.

Even though Heffernam et al. discloses a method and apparatus for accessing non-relational data files, all the claimed features of the present invention are disclosed by Heffernam et al. , and it would have been obvious to one with ordinary skill in the art at the time of the present invention was made to utilize those features in a relational database because of the cost reduction and efficiency.

**Regarding claim 18:**

Claim 18 is rejected for the similar rationale given for claim 15.

Art Unit: 2307

4. Claims 16-17 and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruay L. Ho whose telephone number is (703) 305-3834. The examiner can normally be reached on Monday to Friday from 7 am to 3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (703) 305-9707. The fax phone number for this Group is (703) 308-5357.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Ruay L. Ho  
November 24, 1996

*Thomas G. Black*  
THOMAS G. BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 2300